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ABSTRACT

This report analyzes expenditure patterns that relate costs per full-time equivalent (FTE) student to faculty salaries and benefits, direct instructional support costs and indirect or overhead support costs in Washington postsecondary institutions. Also included is an analysis of overall student/faculty ratios, as well as average salaries and benefits for three categories of faculty (full-time, part-time and graduate assistants). The comparative analysis is exclusive of the four-year health science disciplines. Results are displayed by course level (upper/lower division) and institutional sector (university, four-year college, community college). Community college data are displayed by academic and vocational categories for both first and second year course levels. Tabular data included in this summary show that faculty and salary benefits per FTE student and total direct instructional cost per FTE student are lowest in the community colleges. Overall, total instructional and related costs per FTE student by course level and academic/vocational course are lowest in the community colleges. (Author/JDS)

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SUMMARY REPORT

1974-75

UNIT EXPENDITURES STUDY

Council for Postsecondary Education

Project Officers

Denis J. Curry
Norman M. Fischer

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Council for Postsecondary Education
908 East Fifth Street
Olympia, Washington

June 1977

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908 E. Fifth
Olympia, Washington 98504

ABSTRACT

This is a summary of the final report of the 1974-75 unit expenditures study . This report analyzes expenditure patterns that relate costs per full-time equivalent student to faculty salaries and benefits, direct instructional support costs and indirect or overhead support costs. Also included is an analysis of overall student/faculty ratios, as well as average salaries and benefits for three categories of faculty (full-time, part-time and graduate assistants). The comparative analysis is exclusive of the four-year health science disciplines. The results are displayed by course level (lower division, upper division, etc.) and institutional sector (universities, state colleges, and community colleges). The community college data is displayed by academic and vocational categories for both the first and second year course levels.

In addition to the summary information presented here, the complete final report includes separate sections for the four-year health science disciplines and the methodology developed and used to relate student tuition and operating fee levels to educational costs for each institutional sector within the state. Detailed data for the universities, state colleges, and community college system are also included in the complete report, which is available on request.

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INTRODUCTION

The Council's unit expenditures study remains as one of the few state-level efforts to clearly relate all costs to the instructional, research and public service functions for all of its public universities, state colleges and community colleges. The instructional information base is built from each detailed course level, such as, lower division biology courses or dental hygiene technology courses and aggregated upward by course level and discipline (biology, geography, etc.).

During the past two years the 1972-73 unit expenditures study has been used extensively in the areas of graduate program review, tuition and fee policy analysis and in the review of state budget formulas. In both the tuition and fee and budget formula policy areas the 1974-75 unit expenditures data has already received extensive use. The Council has based its tuition and fee policy recommendations on an objective of undergraduate students paying tuition and operating fees equal to specific percentages of their educational costs (termed "Instructional and Related" costs in this report). The recommended revisions to the instructional staffing formula were also derived from the data base supporting this report.

In keeping with our commitment to have the unit expenditures study compatible with the state's higher education program structure, some changes were made in the program/subprogram structure between the 1972-73 and 1974-75 studies. The overall structure and related definitions, however, remain reasonably comparable with structures being used nationally for the presentation and analysis of higher education costs.

In reviewing the figures contained in this summary report, the reader should avoid comparisons of overall averages except in those cases where the institutions offer reasonably similar instructional programs. The same rule of thumb applies to comparisons of graduate costs at the state colleges and universities where differences in program size and type significantly affect costs. It should also be understood that the data do not necessarily reflect an optimum situation or represent a standard benchmark.

FACULTY SALARIES AND BENEFITS PER FTE STUDENT

The easiest cost to associate with the instruction of students is the cost of faculty salaries and related fringe benefits. These costs represent the portion of the faculty members' workload which has been attributed to the courses which they teach. The amounts shown in Table I do not include the portion related to directed research or public service activities. A proportional share of the cost of persons serving as department chairpersons and college deans are included, however. No supporting costs, e.g., clerical services, supplies, equipment, etc., are included in these figures. Personnel and costs related to the health sciences discipline categories are excluded due to the substantial differences in the programs at the various institutions.

In viewing this information, it is evident that the community college costs are substantially lower than the colleges and universities for lower division academic courses. This is due to the fact that approximately one-third of the instruction is provided by part-time faculty who, in 1974-75 were paid approximating 57 percent of the amount paid to full-time faculty. Also for the community colleges, a distinction has been made between first year and second year course levels. The "First Year" designation represents courses numbered 100-199 with the "Second Year" designation representing courses numbered 200-299. A general conclusion that can be made when comparing the two levels is that student-faculty ratios will be lower and costs will be higher for the second year. The reason for this is that while the community colleges offer a two-year curriculum there are proportionally fewer students available for the second year class offerings.

TABLE I

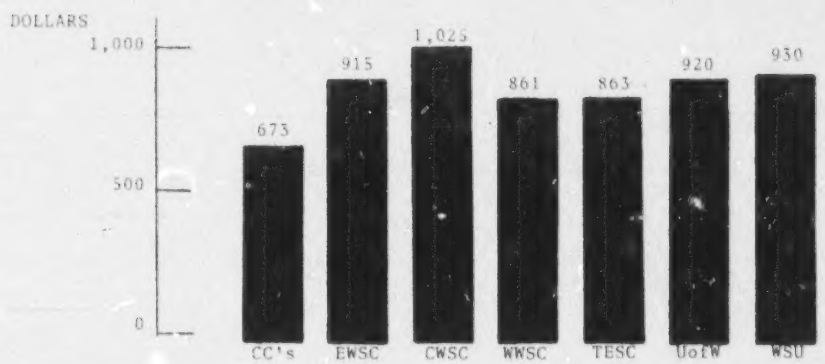
ACADEMIC YEAR 1974-75
FACULTY SALARIES AND BENEFITS PER FTE STUDENT
BY COURSE LEVEL AND ACADEMIC/VOCATIONAL COURSES
(Excluding Health Sciences)

	Lower Division/ Academic	Vocational	Upper Division	Under-Graduate Average	Grad 1 (500)	Grad 2 (600+)	Graduate Average	Overall Average
All Community Colleges								
First Year	$ 608	$654	--	$ 630	--	--	--	$ 630
Second Year	$ 832	$932	--	$ 877	--	--	--	$ 877
Average	$ 648	$700	--	$ 673	--	--	--	$ 673
Eastern WA State College	$ 850	--	$ 986	$ 915	$1,554	$4,276*	$1,722	$ 966
Central WA State College	$ 785	--	$1,227	$1,025	$2,037	$ 860	$1,805	$1,062
Western WA State College	$ 586	--	$1,116	$ 861	$1,814	$2,200	$1,850	$ 910
Three College Average	$ 727	--	$1,116	$ 927	$1,772	$1,952	$1,791	$ 973
The Evergreen State College	$1,111	--	$ 711	$ 863	--	--	--	$ 863
Four College Average	$ 761	--	$1,063	$ 920	$1,772	$1,952	$1,791	$ 961
University of Washington	$ 627	--	$1,258	$ 920	$1,988	$2,579	$2,175	$1,141
Washington State University	$ 677	--	$1,318	$ 930	$2,634	$2,871	$2,730	$1,098
Two University Average	$ 646	--	$1,278	$ 924	$2,113	$2,655	$2,294	$1,126

*Less than 25 FTE students.

FIGURE 1

FACULTY SALARIES AND BENEFITS
PER FTE STUDENT



FTE STUDENTS PER FACULTY

One of the major factors which affects higher education cost patterns is the relationship of students to faculty.

Table II presents these student/faculty ratios by course level and academic/vocational courses.

In reviewing this information, it should be noted that the absence of a graduate program (which includes courses with a lower student/faculty ratio) at The Evergreen State College (TESC) tends to inflate TESC's total average ratio relative to all other institutions. A review which includes TESC should be made at the "undergraduate average" level only.

Deans and directors as well as departmental chairpersons are included in the ratios.

The student/faculty ratios observed in the 1974-75 Unit Expenditures Study served as the primary determinant in developing the faculty staffing portion of the revised instructional budget formula. The Council report entitled: "Recommendations For Modification of Existing Formulas--Instruction" (October 1976) contains an extensive analysis of instructional staffing patterns for both the community college system and the four-year institutions.

SALARIES AND BENEFITS PER FTE FACULTY

Salaries and benefits paid to or on behalf of faculty are another major factor in higher education costs. Table III breaks these costs into two categories: full-time faculty and either part-time faculty (community colleges) or teaching and research assistants (state colleges and universities) with an average for the two groups. It should be noted that these amounts will differ from those shown in salary survey comparisons and the Council's reports on faculty salaries. This is due to the fact that the information in Table III includes all personnel engaged in instruction while salary survey comparisons are limited to full-time faculty with nine month contracts at the rank of instructor or above.

As pointed out in Table I, community college salaries for part-time faculty are approximately 57 percent of the amount paid to full-time faculty. The high average salary for the teaching assistants at Washington State University is an indication of institutional policy regarding assistantship contracts. The current practice at Washington State University raises some questions on the full time equivalent conversion factor used in both the unit expenditures study and the formula system.

TABLE II

ACADEMIC YEAR 1974-75
FTE STUDENTS PER FACULTY BY COURSE LEVEL AND ACADEMIC/VOCATIONAL COURSES
(Excluding Health Sciences)

	Lower Division/ Academic	Vocational	Upper Division	Under-Graduate Average	Grad 1 (500)	Grad 2 (600+)	Graduate Average	Overall Average
All Community Colleges								
First Year	23.6	20.7	--	22.1	--	--	--	22.1
Second Year	20.6	16.2	--	18.4	--	--	--	18.4
Average	23.0	19.8	--	21.4	--	--	--	21.4
Eastern WA State College	19.7	--	17.4	18.5	12.1	4.2	10.9	17.7
Central WA State College	22.4	--	14.6	17.3	9.0	20.6	10.1	16.8
Western WA State College	28.9	--	15.2	19.7	10.3	8.7	10.1	18.8
Three College Average	23.4	--	15.5	18.6	10.5	9.4	10.4	17.8
The Evergreen State College	16.5	--	26.6	21.6	--	--	--	21.6
Four College Average	22.6	--	16.4	18.9	10.5	9.4	10.4	18.2
University of Washington	27.4	--	14.6	19.5	11.3	9.4	10.6	17.0
Washington State University	27.2	--	14.3	20.0	8.3	7.4	7.9	17.5
Two University Average	27.3	--	14.5	19.7	10.6	8.8	9.9	17.2

TABLE III

ACADEMIC YEAR 1974-75
SALARIES AND BENEFITS PER FTE FACULTY - BY TYPE
(Excluding Health Sciences)

	Full-Time Faculty	Community College Part-Time Faculty	Four-Year Teaching Assistants	Overall Average
All Community Colleges				
First Year	$16,575	$9,702	--	$13,928
Second Year	$18,444	$9,583	--	$16,105
Average	$17,012	$9,684	--	$14,370
Eastern WA State College	$17,336	--	$13,443	$17,150
Central WA State College	$17,879	--	$16,485	$17,816
Western WA State College	$17,340	--	$12,917	$17,138
Three College Average	$17,502	--	$14,199	$17,349
The Evergreen State College	$18,604	--	--	$18,604
Four College Average	$17,604	--	$14,199	$17,461
University of Washington	$19,638	--	$17,990	$19,383
Washington State University	$19,083	--	$20,103	$19,258
Two University Average	$19,455	--	$18,743	$19,341

TOTAL DIRECT INSTRUCTION COST PER FTE STUDENT

Support costs include such direct costs as other wages and salaries (clerical staff, laboratory assistants, etc.), equipment, supplies and other current expenses. Adding these amounts to the cost of faculty salaries and benefits (shown in Table I) equals total direct instruction cost as outlined in Table IV.

After the faculty salary and benefits were calculated and related to the disciplines and the course levels, the direct support costs were distributed among the various instructional categories by the community college system and the individual four-year institutions based on criteria outlined in the unit expenditures study guidelines. Figure 2 provides a graphic representation of the mix between faculty salaries and benefits and the direct support costs attributable to undergraduate instruction.

In terms of direct support costs per FTE undergraduate student the community college system has costs that are $83 less than the weighted average for the four state colleges and $132 less than the weighted average for the universities. In the past, different formula factors were used to determine funding levels for the community college system and the four-year institutions, however the Council's recommendation for the revised instructional formula uses the same criteria for both the two- and four-year institutions. For a more detailed analysis of 1974-75 support costs and their relationship to the instruction formula see the Council report entitled: "Recommendations For Modification of Existing Formulas -- Instruction" (October, 1976).

TABLE IV

ACADEMIC YEAR 1974-75
TOTAL DIRECT INSTRUCTION COST PER FTE STUDENT
BY COURSE LEVEL AND ACADEMIC/VOCATIONAL COURSES
(Excluding Health Sciences)

	Lower Division/ Academic	Vocational	Upper Division	Under-Graduate Average	Grad 1 (500)	Grad 2 (600+)	Graduate Average	Overall Average
All Community Colleges								
First Year	$ 742	$ 853	--	$ 795	--	--	--	$ 795
Second Year	$ 944	$1,125	--	$1,025	--	--	--	$1,025
Average	$ 778	$ 898	--	$ 835	--	--	--	$ 835
Eastern WA State College	$1,069	--	$1,263	$1,162	$2,122	$5,944*	$2,344	$1,237
Central WA State College	$ 980	--	$1,572	$1,302	$2,548	$1,048	$2,252	$1,346
Western WA State College	$ 713	--	$1,388	$1,063	$2,468	$2,887	$2,507	$1,134
Three College Average	$ 902	--	$1,412	$1,165	$2,354	$2,587	$2,380	$1,229
The Evergreen State College	$1,516	--	$ 953	$1,167	--	--	--	$1,167
Four College Average	$ 957	--	$1,352	$1,165	$2,354	$2,587	$2,380	$1,222
University of Washington	$ 820	--	$1,645	$1,203	$2,455	$3,586	$2,812	$1,486
Washington State University	$ 941	--	$1,709	$1,244	$3,130	$3,557	$3,303	$1,436
Two University Average	$ 867	--	$1,666	$1,218	$2,585	$3,579	$2,918	$1,469

*Less than 25 FTE students.

FIGURE 2

DIRECT UNDERGRADUATE INSTRUCTIONAL
COSTS PER FTE STUDENT

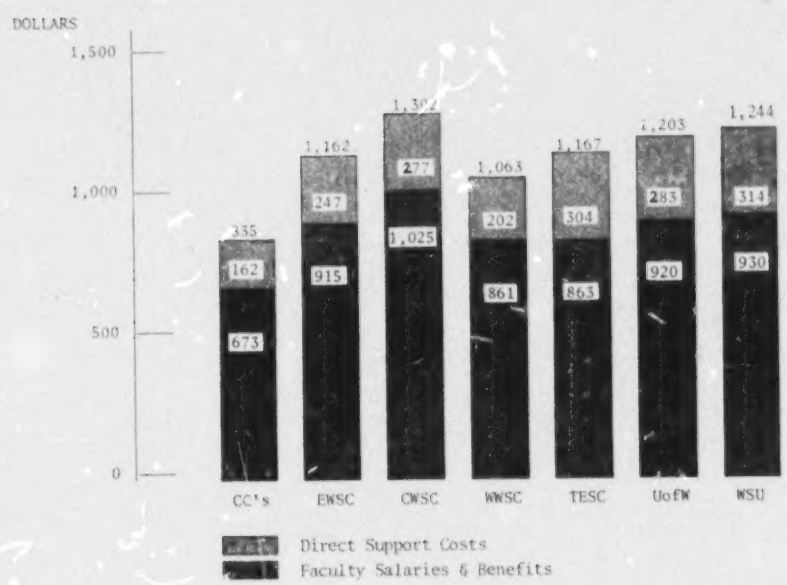


TABLE V

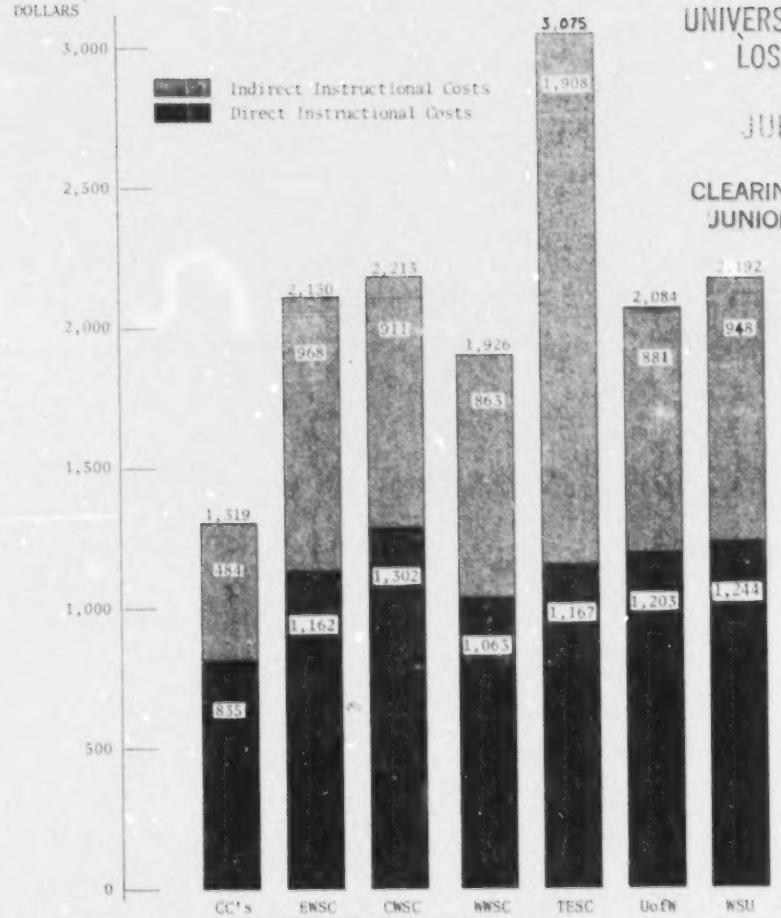
ACADEMIC YEAR 1974-75
TOTAL INSTRUCTIONAL AND RELATED COSTS PER FTE STUDENT
BY COURSE LEVEL AND ACADEMIC/VOCATIONAL COURSES
(Excludes Health Sciences)

	Lower Division/ Academic	Vocational	Upper Division	Under-Graduate Average	Grad 1 (500)	Grad 2 (600+)	Graduate Average	Overall Average
All Community Colleges								
First Year	$1,193	$1,336	--	$1,261	--	--	--	$1,261
Second Year	$1,487	$1,723	--	$1,593	--	--	--	$1,593
Average	$1,246	$1,400	--	$1,319	--	--	--	$1,319
Eastern WA State College	$1,967	--	$2,307	$2,130	$3,563	$9,579*	$3,911	$2,243
Central WA State College	$1,733	--	$2,616	$2,213	$4,096	$1,725	$3,629	$2,279
Western WA State College	$1,392	--	$2,422	$1,926	$3,922	$4,567	$3,982	$2,027
Three College Average	$1,672	--	$2,452	$2,074	$3,826	$4,160	$3,862	$2,168
The Evergreen State College	$3,818	--	$2,621	$3,075	--	--	--	$3,075
Four College Average	$1,863	--	$2,474	$2,185	$3,826	$4,160	$3,862	$2,264
University of Washington	$1,488	--	$2,773	$2,084	$3,976	$6,552	$4,789	$2,560
Washington State University	$1,749	--	$2,870	$2,192	$4,753	$5,463	$5,040	$2,458
Two University Average	$1,590	--	$2,805	$2,123	$4,126	$6,269	$4,843	$2,525

*Less than 25 FTE students.

FIGURE 3

TOTAL UNDERGRADUATE INSTRUCTIONAL AND
RELATED COSTS PER FTE STUDENT



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